United States District Court

For the Northern District of California

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8   IN THE UNITED STATES DISTRICT COURT

9   FOR THE NORTHERN DISTRICT OF CALIFORNIA

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11   BUSINESS OBJECTS, S.A.,   No. C 01-03908 CRB

12   Plaintiff,   **MEMORANDUM AND ORDER
                                                  GRANTING MOTION FOR
13   v.   SUMMARY JUDGMENT**

14   MICROSTRATEGY, INC.,

15   Defendant.
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17   Plaintiff Business Objects, S.A. ("Business Objects") and defendant Microstrategy,

18   Inc. ("Microstrategy") produce software products which allow users to query a relational

19   database without learning the complex syntax of the query language. Business Objects

20   brought this patent action against Microstrategy alleging that defendant's products infringe

21   U.S. Patent No. 5,555,403 ("the '403 patent") literally and under the doctrine of equivalents.

22   Now before the Court is defendant's post-remand motion for summary judgment that the

23   accused products do not infringe claim 4 of the '403 patent under the doctrine of equivalents.

24   After carefully considering the papers submitted by the parties and having had the benefit of

25   oral argument, the Court hereby GRANTS the motion for summary judgment.

26   **BACKGROUND**

27   The subject matter of the '403 patent and the structure of the accused products have

28   been explained in detail in this Court's prior order and by the Federal Circuit and will not be

1 repeated here. See Business Objects, S.A., v. Microstrategy, Inc., 393 F.3d 1366, 1367-71

2 (Fed. Cir. 2005).

3   This Court previously granted defendant's motion for summary judgment that the

4 accused products do not infringe claims 1, 2 or 4 of the '403 patent literally or under the

5 doctrine of equivalents. On appeal, the Federal Circuit affirmed each of these holdings

6 except this Court's determination that the accused products do not infringe claim 4 under the

7 doctrine of equivalents. With respect to that claim, the Federal Circuit reversed and

8 remanded, finding that this Court erred in determining that an amendment during prosecution

9 to the term "predefined query language" estopped plaintiff from claiming equivalents of the

10 function of the query engine means of claim 4. See Business Objects, 393 F.3d at 1375-76.

11 Defendant now moves for summary judgment with respect to the remaining claim, arguing

12 first that the Federal Circuit's holdings resolve the remaining issue of equivalence and

13 second, that in any event no reasonable trier of fact could find equivalence.

I. Summary Judgment Standard

15   Summary judgment is appropriate when the "pleadings, depositions, answers to

16 interrogatories, and admissions on file, together with the affidavits, if any, show that there is

17 no genuine issue as to any material fact and that the moving party is entitled to judgment as a

18 matter of law." Fed. R. Civ. P. 56(c). An issue is "genuine" only if there is sufficient

19 evidence for a reasonable fact finder to find for the non-moving party. See Anderson v.

20 Liberty Lobby, Inc., 477 U.S. 242, 248-49 (1986). A fact is "material" if the fact may affect

21 the outcome of the case. See id. at 248. "In considering a motion for summary judgment, the

22 court may not weigh the evidence or make credibility determinations, and is required to draw

23 all inferences in a light most favorable to the non-moving party." Freeman v. Arpaio, 125

24 F.3d 732, 735 (9th Cir. 1997). A principal purpose of the summary judgment procedure is to

25 identify and dispose of factually unsupported claims. See Celotex Corp. v. Cattrett, 477 U.S.

26 317, 323-24 (1986).

27   The party moving for summary judgment bears the initial burden of identifying those

28 portions of the pleadings, discovery, and affidavits which demonstrate the absence of a

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1 genuine issue of material fact. See id. at 323. Where the moving party will have the burden

2 of proof on an issue at trial, it must affirmatively demonstrate that no reasonable trier of fact

3 could find other than for the moving party. See id. Once the moving party meets this initial

4 burden, the non-moving party must go beyond the pleadings and by its own evidence "set

5 forth specific facts showing that there is a genuine issue for trial." Fed. R. Civ. P. 56(e). The

6 non-moving party must "identify with reasonable particularity the evidence that precludes

7 summary judgment." Keenan v. Allan, 91 F.3d 1275, 1279 (9th Cir. 1996) (quoting Richards

8 v. Combined Ins. Co., 55 F.3d 247, 251 (7th Cir. 1995), and noting that it is not a district

9 court's task to "scour the record in search of a genuine issue of triable fact"). If the non-

10 moving party fails to make this showing, the moving party is entitled to judgment as a matter

11 of law. See Celotex, 477 U.S. at 323.

II. Infringement Under the Doctrine of Equivalents

    A. The Doctrine of Equivalents Standard

14   Under the doctrine of equivalents, a product that does not literally infringe a patent

15 claim may still infringe if each and every limitation of the claim is literally or equivalently

16 present in the accused device. See Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520

17 U.S. 17, 40 (1997) ("In our view, the particular linguistic framework used is less important

18 than whether the test is probative of the essential inquiry: Does the accused product or

19 process contain elements identical or equivalent to each claimed element of the patented

20 invention?").

21   Whether an element of an accused product (or the product itself in its entirety)

22 infringes under the doctrine of equivalents depends in part on whether that component (and

23 the device overall) performs substantially the same function as the claimed limitation in

24 substantially the same way to achieve substantially the same result. See Ethicon Endo-

25 Surgery, Inc. v. United States Surgical Corp., 149 F.3d 1309, 1315 (Fed. Cir. 1998);

26 Pennwalt Corp. v. Durand-Wayland, Inc., 833 F.2d 931, 934-35 (Fed. Cir. 1987) (en banc)

27 ("Under the doctrine of equivalents, infringement may be found (but not necessarily) if an

28 accused device performs substantially the same overall function or work, in substantially the

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1 same way, to obtain substantially the same overall result as the claimed invention."). If the

2 differences between a claim and an accused device are "insubstantial" to one with ordinary

3 skill in the art, the product may infringe under the doctrine of equivalents. See Ethicon, 149

4 F.3d at 1315; Sage Prods., Inc. v. Devon Indus., Inc., 126 F.3d 1420, 1423 (Fed. Cir. 1997).

5 The doctrine prevents an accused infringer from avoiding infringement by changing minor

6 details of a claimed invention while retaining its essential functionality. See id. at 1424.

7 "Although equivalence is a factual matter normally reserved for a fact finder, the trial court

8 should grant summary judgment in any case where no reasonable fact finder could find

9 equivalence." See Sage, 126 F.3d at 1424-26 (citation omitted).

10   **B. The Impact of the Federal Circuit's Opinion**

11   Microstrategy argues that the Federal Circuit's opinion conclusively establishes that

12 the accused products do not infringe claim 4 under the doctrine of equivalents. This Court

13 disagrees.

14   1. 35 U.S.C. §112(6)

15   Microstrategy first claims that the Federal Circuit's ruling that the accused products

16 do not infringe the patent under 35 U.S.C. section 112 paragraph 6 is dispositive with respect

17 to infringement under the doctrine of equivalents. The Federal Circuit has explained that the

18 relationship between equivalents for the purposes of section 112(6) and the doctrine of

19 equivalents is based on the function-way-result test. See Kemco Sales, Inc. v. Control Papers

20 Co., Inc. 208 F.3d 1352, 1364 (Fed. Cir. 2000). As described above, under that test the

21 accused device infringes where the accused structure performs "substantially the same

22 function, in substantially the same way to achieve substantially the same result, as the

23 disclosed structure." Id. In contrast, "[l]iteral infringement of a § 112 ¶ 6 [means-plus-

24 function] claim requires that the relevant structure in the accused device perform the identical

25 function recited in the claim and be identical or equivalent to the corresponding structure in

26 the specification." Lockheed Martin Corp. v. Space Systems/Loral, Inc., 324 F.3d 1308,

27 1320 (Fed. Cir. 2003). Therefore, "[a] key feature that distinguishes 'equivalents' under

28 section 112, paragraph 6 and 'equivalents' under the doctrine of equivalents is that section

112, paragraph 6 equivalents must perform the identical function of the disclosed structure

. . . while equivalents under the doctrine of equivalents need only perform a substantially

similar function." Kemco Sales, 208 F.3d at 1364 (citations omitted).

This Court previously ruled that there was no literal infringement of claim 4 because

the "predetermined query language" of that claim requires the association of a SELECT

clause with a familiar name during the associating step. See Business Objects, S.A. v.

Microstrategy, Inc., 280 F.Supp.2d 1000, 1004 (N.D. Cal. 2003). This Court based its ruling

on the narrow basis that "the accused device does not include the *identical* function." Id.

(emphasis in original). The Federal Circuit affirmed. Business Objects, 393 F.3d at 1374.

That court did not discuss equivalents and therefore there is no basis to assume that the

court's ruling reached any further than did this Court's. Therefore, the only finding that has

been made is that the accused products do not practice the identical function to the invention

of claim 4 under section 112(6) and plaintiff is not legally precluded from arguing that there

is infringement under the doctrine of equivalents because the accused devices practice a

substantially equivalent function and posses a substantially equivalent structure to the

invention of claim 4. See Kemco Sales, 208 F.3d at 1364.

2. Prosecution History Estoppel

Microstrategy also argues that the Federal Circuit's finding of prosecution history

estoppel with respect to claim 1's "associating step" limitation also applies to claim 4's

"predetermined query language." The Federal Circuit affirmed that the terms "predefined

query language" and "predetermined query language" in claims 1 and 4 have the same

meaning and require the association of a SELECT clause to a familiar name during the

associating step. See id. at 1373. The parties also agree that the accused products do not

associate a SELECT clause with a familiar name. Therefore, if plaintiff were estopped from

claiming equivalents to this association by the narrowing amendment to claim 1's associating

step, plaintiff would be precluded from claiming equivalents to claim 4. See Southwall

Tech., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1579 (Fed. Cir. 1995) ("[A]rguments made

during prosecution regarding the meaning of a claim term are relevant to the interpretation of

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1   that term in every claim of the patent absent a clear indication to the contrary."). However,

2   plaintiff is only estopped from claiming equivalents to the association of a *WHERE* clause

3   with a familiar name. See Business Objects, 393 F.3d at 1374. Neither this Court nor the

4   Federal Circuit has ruled that the estoppel flowing from the narrowing amendment creating

5   the "associating step" limitation also encompasses the association of a *SELECT* clause with a

6   familiar name. Therefore, prosecution history estoppel does not apply.

C. Substantial Differences Between Claim 4 and the Accused Products

8   Although the Court finds that the Federal Circuit's ruling is not determinative with

9   respect to plaintiff's present motion, even a cursory comparison of the accused devices to the

10 "query engine means" of claim 4 reveals that no reasonable finder of fact could find

11 equivalence. See Business Objects, 393 F.3d at 1368-71 (describing the differences in the

12 structure of the claimed invention and the "much more sophisticated approach to generating

13 queries" used by the accused products).

14 The patent discloses an eight-step process for converting the patent's "business

15 objects"--i.e. familiar names associated with SELECT and WHERE clauses--to SQL queries.

16 See Business Objects, 393 F.3d at 1373 (affirming that the "query engine means" of claim 4

17 corresponds with the algorithm described at Col. 4:42-52; Col. 7:48-54; Col. 8:21-23; Col.

18 9:14-40; and Col. 9:52-Col. 13:2). There is no dispute that the accused products contain

19 *none* of these steps. Nonetheless plaintiffs argue that analogues can be found in the accused

20 products to each step such that the two query engines are insubstantially different as a whole.

21 This proves too much. The Court agrees with Business Objects that the query engine

22 algorithms of the two systems must be compared as a whole and a single difference in one

23 step of the algorithm is not necessarily sufficient to find the entire algorithm substantially

24 different. See Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1268 (Fed. Cir. 1999).

25 However, when the two systems are evaluated as a whole, their nonequivalence becomes

26 apparent. Indeed, the differences in the structures of the two systems are so numerous and

27 substantial that reasoned comparison is nearly precluded.

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1   1. Use of Different Metadata

2   The central difference between the system claimed in the '403 patent and the accused

3   products is that the '403 system stores the data regarding the tables in the underlying

4   database in strings of SELECT and WHERE clauses associated with familiar names while

5   the accused products store this information in a multi-level hierarchy of data that models the

6   underlying database. See Business Objects, 393 F.3d at 1368-71. This difference is

7   important because it means that both the function and the structure of the accused query

8   engine algorithm is not identical to the algorithm of claim 4. The function is different

9   because the '403 query engine converts combinations of the patent's business objects into the

10   final query language, see id. 393 F.3d at 1373-74 (finding that the functions of the two

11   systems are not identical because the query engine means requires the association of a

12   SELECT clause with a familiar name during the associating step), while the accused devices

13   convert combinations of objects coded in Microstrategy's metadata into the final query.

14   Obviously the structures of the two devices are also different because each algorithm is

15   structured to process the particular metadata that it was created to convert. These differences

16   mean that the two query engines are not interchangeable, which is itself an important gauge

17   of the substantialness of the differences. See Multiform Desiccants, Inc. v. Medzam, Ltd.,

18   133 F.3d 1473, 1480 (Fed. Cir. 1998). The lack of interchangeability is undisputed.

19   That the query engine means of claim 4 is structured for the specific purpose of

20   converting the metadata described by the patent into the final query is reflected at several

21   places in the description of the structure of the algorithm. The query engine requires inputs

22   such as a predefined list of joins, Col. 7: 48-41, 10:40-42, 11:25-29, 12:11-25, SELECT

23   clauses associated with familiar names, Col. 10:12-15, Business Objects, 393 F.3d at 1373,

24   contexts, Col. 10:50-67, 11:25-28, and WHERE clause conditions associated with familiar

25   names, Col. 11:31-32. See also Business Objects, 393 F.3d at 1368-71 (describing the

26   differences in the structure of the '403 patent's metadata and Microstrategy's metadata).

27   However, Microstrategy's metadata is not structured in this manner and therefore could not

28   be translated into a SQL query by the '403 patent algorithm. In order to convert

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Microstrategy's metadata into a the final query, the accused products' algorithm operates in a way that is entirely different from the claimed process. See id. at 1371.

For example, because Microstrategy's metadata is not tied to the specific tables and columns of the underlying database (as is the metadata of the '403 patent) the specific tables that will be accessed in a particular query is not determined until the query generation step and are influenced by factors other than the familiar names selected by the user making the query. Id.; see also GTE Wireless v. Qualcomm, Inc., 188 F.Supp.2d 1201, 1214-15 (S.D. Cal. 2002) (finding substantial differences in the structure of a patented phone algorithm which "blindly search[ed] the same . . . frequencies every time" and an algorithm which searched different frequencies depending on other contextual information). In addition, unlike the system of the patent which always produces a single, unified query, Microstrategy's metadata and query algorithm are structured to conduct multi-pass queries along different join trees. With respect to some portions of the final query, such as the generation of an ORDERBY clause, Microstrategy's query engine can only produce the final SQL syntax through these multi-pass queries.

The consequence of the greater complexity of Microstrategy's metadata and query engine, see id. at 1170 ("the accused products use a much more sophisticated approach"), is greater and improved functionality than the system in the '403 patent. An example of this improved functionality is the accused products' ability to search multiple groups of tables in order to minimize the number of tables accessed. This creates faster and more efficient queries. A second example is that by using metadata independent of the form and syntax of the final query language, Microstrategy's query engine has the ability to combine and organize data in a manner that is not allowed by the constraints of the final query language. Such increased functionality includes the ability to perform a standard deviation function and to more efficiently sort data contained in the query. See Reddy Dec. ¶ 31.[1]

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[1]Business Objects has moved to strike the Declarations of Drs. Reddy and Keller. The motion is denied. The Court finds that the portions of the Reddy declaration that it has relied upon to be a summary of Dr. Reddy's observations of the software code at issue and that the declaration was based on admissible and reliable information. The Court has not relied on Dr.

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1   Business Objects argues that the asserted differences are not substantial as a matter of

2   law because each of them only results in the accused products being able to perform

3   functions in addition to common functions of the two systems. The fallacy of this argument

4   is that it assumes that undisputed differences in *structures* are insubstantial if those

5   differences result in the device performing additional *functions*, or the same function in a

6   better and more useful manner. Business Objects has cited no authority that supports such a

7   narrow definition of substantiality. Indeed, it is hard to imagine a substantial change in the

8   structure of a device that would not have some effect on its functionality. The appropriate

9   test for infringement under the doctrine of equivalents is that the accused products must have

10   substantially the same function *and* substantially the same structure. See Conopco, Inc. v.

11   May Dep't Stores Co., 46 F.3d 1556, 1562 (Fed. Cir.1994) ("The doctrine of equivalents

12   cannot be used to erase"meaningful structural and functional limitations of the claim on

13   which the public is entitled to rely in avoiding infringement.'" (internal citations omitted));

14   Network Appliance, Inc. v. Bluearc Corp., No. C 03-5665 MHP, 2005 WL 1530222 *9 (N.D.

15   Cal. June 27, 2005) ("[H]aving patented an invention that includes [clear] structural

16   limitations, plaintiff cannot rely on the 'functional interchangeability' of substantially

17   different structures in order to sweep any computer architecture that is functionally

18   equivalent to that invention into the scope of the patent's claims."). This Court finds that the

19   numerous differences in structure of the two query engines are substantial.

20   2. Joins

21   One example of the ways in which the difference in metadata makes a substantial

22   difference in the structure of the two systems is their treatment of joins. The '403 patent

23   requires the manager to predefine a list of all the potential joins that might be used in a query.

24   In contrast, the accused products do not utilize such a predefined list and instead

25   automatically generate joins based on common column names.

26   In the '403 system, the creation of the list of joins is required by a portion of the

27   specification that this Court has identified as being associated with the query engine means.

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Keller's declaration and therefore need not rule on its admissibility.

1   See Col. 7:48-54 ("the Manager defines the list of all the potential joins between the tables

2   involved in a Universe."); see also Business Objects 393 F.3d at 1373 (affirming that this

3   portion of the patent is part of the query engine means). The specification itself states that

4   "the list of Joins *is an important part* of the Universe definition." Col. 7:55-56 (emphasis

5   added). This is demonstrated by the fact that the list of joins is used by the patent's query

6   engine algorithm several times. See Col. 10:40-42; 11:25-29; 12:11-25. In fact, if a list of

7   joins has not been specified, the query will be invalid. See Col. 10:44-45.

8   From a practical standpoint, the fact that the accused products do not require a list of

9   joins is important because it saves the consumer the burden of having the Manager manually

10   specify all possible joins in a particular database. For large databases that are common in

11   commercial uses of these products, that burden would be onerous. The patent's use of a list

12   of joins, however, has some advantages over the accused devices' system. While the accused

13   system may save time because joins can be determined by careful labeling of columns when

14   the underlying database is created (rather than through a separate step of creating a list of

15   joins), it also may be more error prone since columns may be erroneously joined or not joined

16   because of a failure to label them correctly. It also obviously requires that the underlying

17   database be created in a manner that is compatible with the Microstrategy algorithm. The

18   accused products therefore contain a distinct design that makes a difference in how the

19   product may be used.

20   Business Objects' expert does nothing to contradict the fact that the treatment of joins

21   in the two systems is substantially different. He states only that in the accused products the

22   definitions of the attributes in the schema "includes an implicit list of joins to represent

23   possible join paths." Rudd Dec. ¶ 89. Dr. Rudd does not identify any structure in the

24   metadata that corresponds to a physical list of joins, even though such an actual list is a

25   necessary component in the '403 patent's query engine algorithm. See Col. 10:40-42; 11:25-

26   29; see also Rudd Depo, 349:9-11 (admitting that there is not "a single data structure that

27   lists all of the pairs of tables in it"). Nor does Dr. Rudd explain how it can be an

28   insubstantial difference for the accused devices to automatically generate join paths while the

'403 system requires the Manager to "define[] the list of all the potential joins between the tables involved in the Universe." Col. 7:50-51.

Because the '403 patent itself labels the list of joins to be "an important part of the Universe definition," and because there is no dispute that the accused products eliminate the burden of creating such a list, it is a substantial difference.[2]

CONCLUSION

For all of the foregoing reasons, defendant's motion for summary judgment is GRANTED.

IT IS SO ORDERED.

Dated: July 26, 2005

CHARLES R. BREYER
UNITED STATES DISTRICT JUDGE

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[2]Related to the fact that the accused products do not incorporate a list of joins, is that the accused products also do not utilize "contexts." See Col. 4:50-51; 5:40, 7:59-66, 15:64-67. As defined in the '403 patent, contexts resolve the problem that multiple join paths may be generated from a single query. In contrast, the accused products resolve this type of problem by choosing the first join path found by the program. See Rudd Decl. 353:5-25. This is an additional undisputed difference that supports the substantiality of the differences between the two systems.